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BACKGROUND TO THE HOMELESSNESS CAPACITY MODEL (THE WAUGH MODEL)

Introduction

1. In 2007-08 Dr Andrew Waugh was seconded to the Scottish Government to assist in introducing an improved homelessness statistical data collection and to adapt, for the Government's use, his model of councils' capacity to meet the needs of homeless households. Dr Waugh had constructed a model of the dynamics of the homelessness application process as part of his doctorate and further developed this while working for the Scottish Council for the Single Homeless and Tribal consultancy. The model had been used to provide advice to a number of councils to assist in planning to meet the needs of homeless applicants. The modelling was particularly useful in assessing the implications for numbers in temporary accommodation of different approaches to meeting the 2012 homelessness commitment.

2. In his work for the Scottish Government, Dr Waugh's brief was to develop his model to assist in advising Ministers on the capacity of each of Scotland's 32 councils to meet the 2012 commitment. The aim was to allow us to assess the impact under a range of different scenarios covering new supply, changes in levels of homelessness and different rates of increase in the proportions of applicants assessed as priority.

The 2012 homelessness commitment

3. The commitment is set out in the Homelessness etc. (Scotland) Act 2003 – [See Annex 1]. In effect the Act requires:-

Section 2 (1): Scottish Ministers to present to Parliament secondary legislation to remove the distinction between priority and non-priority homeless.

Section 2 (2): Prior to presenting this legislation to Parliament, Scottish Ministers must be satisfied that all councils have the capacity to meet the commitment.

Section 3 (1), (2): Scottish Ministers must set a target date – no later than 31 December 2012 – for making the legislation to remove the distinction.

4. The interim statement was published in 2005 and interim targets were set for each council based on halving the 2003-04 proportion of homeless applicants assessed as non-priority by 2008-09. Achievement against these targets will be published with the 2008-09 homelessness statistics in late summer/ early autumn 2009.

How the model assesses capacity

5. The model – which is run separately for each council – is in two parts:-

Supply: This section projects the stock of local authority and housing association housing and the consequent annual number of lets available from this stock for new tenants. It also projects the number of lets which could be available for homeless households from the private rented sector.

Need: This section projects the number of homeless households who will require a permanent let in each year.

6. The model uses the changing relationship between supply and need over the projection period to estimate any shortfall in supply of lets to meet homelessness

housing need and the impact of this on numbers in temporary accommodation. An essential feature of the model is that homeless households assessed as priority will spend longer in temporary accommodation than non-priority households and time in temporary accommodation increases as the available supply of lets decreases.

7. Technically, the model runs as 32 separate council models in the mathematical programming language – Matlab. The model for each council is fitted to the information for the base year on stock, lets, homeless applications and numbers in temporary accommodation on 31 March. [A typical model run for all 32 councils can take 6-7 hours.] The model can be run for sub local authority geographies as long as the main inputs are available for the smaller areas.

Model inputs

8. Annex 2 gives a detailed listing of the key inputs to both the supply and need sections of the model and the sources of data used for these. All inputs to the model can be changed and updated when we re-base. Those inputs to the model which are we vary when assessing factors affecting councils' capacity to meet the 2012 commitment are.

Supply

- a) Planned/ projected new building each year of houses for social let through the development programme.
- b) Planned/ projected local authority new building of houses for let.
- c) Projected sales of local authority and housing association housing.
- d) Current and projected non-viable local authority stock and projected decants from these to local authority/ housing association.
- e) Projected level of private rented lets which might be suitable for homeless applicants.

Demand

- a) Projected levels of homelessness, including the impact of prevention.
- b) Projected percentage of homeless assessed as priority.
- c) Projected percentage of priority homeless requiring a social let.

Model outputs

9. Key outputs from the model are:-

- a) Year on year change in numbers in temporary accommodation if number of social and private rented lets to homeless doesn't change;
- b) Implications for local authority lets and numbers in temporary accommodation if local authority lets increase as far as possible to meet the need; but RSL and PRS lets stay the same;
- c) Implications for local authority and RSL lets and for numbers in temporary accommodation if local authority and RSL lets increase as far as possible to meet the need; and PRS stays the same;

- d) Implications for LA , RSL and PRS lets if PRS provides the maximum contribution and local authority and RSL lets increase as far as possible to meet the need.

Use of the model

10. Outcomes from the model from a range of scenarios based on 2006-07 data were presented to the 'Firm Foundations' seminar last year and subsequently to a Shelter conference in July. Annex 3 provides a brief summary of the main outputs. From this analysis:-

- Numbers in temporary accommodation would double if the priority distinction was removed and there was no increase in social or other lets to homeless.
- If only local authority/ LSVT lets to homeless were to increase to meet the increased need there are 19 local authority areas where more than 60% of available lets would be required for homeless households of which 8 would require more than 90% of lets.
- If RSLs give the same proportion of lets to homeless as LA/ LSVT there would be 9 local authority areas where more than 60% of lets would be needed for homeless households; of which 2 authorities would require 90% or more of available lets.
- If the modelled potential contribution from the Private Rented sector could be realised there would be 3 areas where more than 60% of available LA/ RSL lets would be needed for homeless households.
- Re-distribution of around 3,500 – 4,000 per year new social housing for let towards the local authority areas under the greatest pressure would significantly improve their capacity to meet the commitment.

11. We have completed the first phase of updating the model to a 2007-08 base. There have been some changes in the base data – notably significant reductions in numbers of homeless in a few of the council areas under greatest pressure. Apart from some small shifts in the assessed relative pressure, the first outputs from the model confirm the pattern from the 2006-07 model.

12. The next steps for the 2007-08 model are:-

- To update the housing supply inputs to reflect the committed/ expected pattern of HAG approvals in 2008-09 and 2009-10.
- To update the housing supply inputs to reflect local authority new build plans.
- To follow up some of apparently anomalous data from the HL1 for a couple of councils where the homelessness lost contact rate looks to be incredible.

Relationship to wider assessments of affordable housing need

Supply

13. It is notable that the supply component of the Waugh model is very similar to the supply component of affordable housing needs assessments such as those in the Bramley model and in Strategic Housing Market Assessment guidance. The sources of data used and the assumptions made will be nearly identical, except that:-

- Homelessness modelling separately models the supply of lets from local authority/ LSVT landlords and lets from housing associations. This is because one of the purposes of the homelessness modelling is to examine the impact of variable contributions from local authorities and from housing associations.

- Homelessness modelling aims to take account of the capacity of the private rented sector to provide tenancies as an outcome from homelessness applications.
- In the homelessness modelling we use the proportion of social lets needed for homeless as an indicator of pressure/ capacity to meet the commitment; with 60% or more of lets needed for homeless being an indication of significant pressure.

Need

14. Applicants for homelessness assistance who are assessed as homeless or potentially homeless clearly have a housing need; and almost all will not be able to meet their needs in the housing market through renting privately or buying. Homelessness is a fairly complex phenomenon with deprivation clearly an important driver. Information gathered from the first time from 1 April 2007 on the prior circumstances of applicants set against their reasons for homelessness points to 3 broad groups:-

- Younger homeless households – single, and single parents - coming from the family home or living with friends or partners. The main reason for homelessness in this group is that relatives, friends or partners can no longer accommodate them; or relationship breakdown. These will form part of the group of newly forming households who cannot afford to buy or rent at market rates; as defined in strategic housing markets assessments guidance.
- Households coming from their own accommodation – previously renting or buying – who are homeless because of mortgage default, rent arrears, unemployment These households will form part of the backlog need as defined in strategic housing markets assessments guidance.
- Those whose previous accommodation was institutional – prison/ hospital/ armed forces or who were in temporary accommodation. ; or from various forms of temporary accommodation. These will also mainly form part of the backlog group.

Communities Analytical Services
February 2009

Annex 1: EXTRACT FROM HOMELESSNESS ETC. (SCOTLAND) ACT 2003

2. Abolition of priority need test

(1) From such day as the Scottish Ministers may by order made by statutory instrument appoint, the question whether an applicant has a priority need is to be left out of account in determining the duties of a local authority under—

- (a) section 31 (duties to persons found to be homeless), and
 - (b) section 32 (duties to persons found to be threatened with homelessness),
- of the 1987 Act.

(2) The day to be appointed under subsection (1) is the earliest day on which, in the view of the Scottish Ministers, all local authorities can reasonably be expected to perform the duties under sections 31 and 32 of the 1987 Act as modified by that subsection.

(3) An order under subsection (1) may make—

- (a) such modifications of Part II of the 1987 Act and any other enactment, and
 - (b) such incidental, supplemental, consequential, transitional, transitory or saving provision,
- as the Scottish Ministers think necessary or expedient in consequence or for the purposes of that subsection.

(4) Except where subsection (5) applies, a statutory instrument containing an order under subsection (1) is subject to annulment in pursuance of a resolution of the Scottish Parliament.

(5) No order under subsection (1) containing provisions which add to, replace or omit any part of the text of an Act is to be made unless a draft of it has been laid before, and approved by resolution of, the Parliament.

3. Statement on abolition of priority need test

(1) The Scottish Ministers must, by 31st December 2005, prepare and publish a statement setting out the measures which they and local authorities have taken, are taking and intend to take for the purpose of ensuring that local authorities can reasonably be expected to perform the duties under sections 31 and 32 of the 1987 Act as modified by section 2(1) of this Act.

(2) The statement must specify—

- (a) a target date (which must be no later than 31st December 2012) for the achievement of that purpose, and
- (b) interim objectives towards the achievement of that purpose.

(3) Those interim objectives may include proposals to specify, under section 25(2)(a) of the 1987 Act, further descriptions of persons as having a priority need for accommodation.

(4) The Scottish Ministers—

- (a) must keep the statement under review,
- (b) may from time to time modify the statement, and
- (c) must publish any modified statement.

(5) In preparing or modifying the statement, the Scottish Ministers must have regard to the homelessness strategies and local housing strategies prepared by local authorities under sections 1 and 89 respectively of the Housing (Scotland) Act 2001 (asp 10) (“the 2001 Act”).

(6) Before preparing or modifying the statement the Scottish Ministers must consult—

- (a) such associations representing local authorities, and
 - (b) such other persons,
- as they think fit.

ANNEX 2: Key inputs to the Waugh Model

Input	Source	Comment
A: Stock and lettings section		
1: Stock and lettings of local authority and LSVT viable stock.		
Local Authority viable stock at beginning and end of the base year.	Stock return to Housing Statistics Branch.	
Projected sales of local authority stock to sitting tenants in each year over the projections period.	Sales return to Housing Statistics Branch – trended forward over the projections period.	Present method is likely to overstate sales to sitting tenants, given recent fall-off.
Projected new council house building by local authorities.	From published plans where available.	In 06-07 base model Midlothian was the only council with projected new build.
Tenants in local authority viable stock at the beginning and end of the base year.	Lettings return to Housing Statistics Branch.	
Vacancies arising in local authority viable stock during the base year and projected for each year in the projections period.	Lettings return to Housing Statistics Branch. Vacancies arising in viable stock minus number filled through transfers.	We currently project these forward at a fixed rate based on average of previous 3 years.
Lettings to new tenants during the base year.	Lettings return to Housing Statistics Branch.	This gives the initial rate at which vacancies in the viable stock are filled.
2: Stock and decants from local authority and LSVT non-viable stock.		
Local authority non-viable stock at the beginning and end of the base year.	Stock return to Housing Statistics Branch	Aberdeen figures have been modified to a more realistic base.
Projected demolitions of non-viable local authority stock for each year over the projections period.	From local authority plans. Taken in part from SHQS plans.	This needs to be updated to 2007-08 base.
Tenants in local authority non-viable stock at the beginning and end of the base year.	From local authority plans. Taken in part from SHQS plans.	
Projected decants from non-viable local authority stock to local authority and housing association stock in each year over the projection period.	From local authority plans. Taken in part from SHQS plans.	This needs to be updated to 2007-08 base.
3: Housing association (excluding LSVT) stock and lettings		

Housing association stock at the beginning and end of the base year.	From Annual Performance Statistical Return (APSR).	
Housing association new building in base year and over projections period.	From APSR for base year; projections based on development programme approvals.	
Housing Association sales to sitting tenants in base year and in each year over the projections period.	From APSR for base year. Projections assume constant rate.	Numbers are quite small and have no significant short-term impact on available lettings. The model allows modelling of the impact of extending RTB to housing association tenants.
Number of demolitions of housing association stock in base year and projected over model period.	From APSR for base year. Projections currently assume no demolitions.	Note: In the model RSL stock excludes stock from Large Scale Stock Transfers; which are grouped with the LA/LSVT category.
Number of housing association tenants at beginning and end of base year.	From APSR for base year.	
Turnover rate of housing association stock.	3 year average of rate at which existing housing association stock becomes vacant and is let to new tenants (i.e. excluding transfers).	
4: Private rented stock and total annual lets.		
Private rented stock.	From registration statistics.	
Private rented lets.	From annual turnover data from the Scottish Household Survey.	The model currently assumes that no more than 10% of private rented lets would be suitable for homeless.
B: Homelessness section		
Number of homeless applicants in base year and in each year over the projections period.	Homelessness Statistics Return (HL1). Projections assume fixed level of homeless applications over the period.	Homelessness levels can be varied in the model to assess the impact of improved prevention or deterioration in numbers of applications.
Proportion of homeless applicants in 2003-04 who were assessed as priority.	Homelessness Statistics Return (HL1). Used to set the 2008-09 interim target.	The model allows the profile of movement towards the 2012 target to be varied.

Priority need assessments in the base year.	Homelessness Statistics Return (HL1).	
Outcomes of priority homelessness applications in base year.	Homelessness Statistics Return (HL1).	Gives the starting position in modelling the impact of different shares of local authority, housing association and private rented lets to priority homeless.
Number of homeless in temporary accommodation at the end of the base year.	Homelessness Statistics Return (HL2).	Gives a starting point from which changes in numbers in temporary accommodation are projected.
Number of households at different stages of their homeless application at the end of the base year.	Homelessness Statistics Return (HL1).	
Projected changes in homelessness lost contact rates.	Assumptions input to the model. Currently set at no change for all councils except Glasgow – where lost contact % is projected to reduce by 2% points per year.	There are two other councils with apparently very high lost contact rates which it would be useful to explore with them.